FIGURE 1

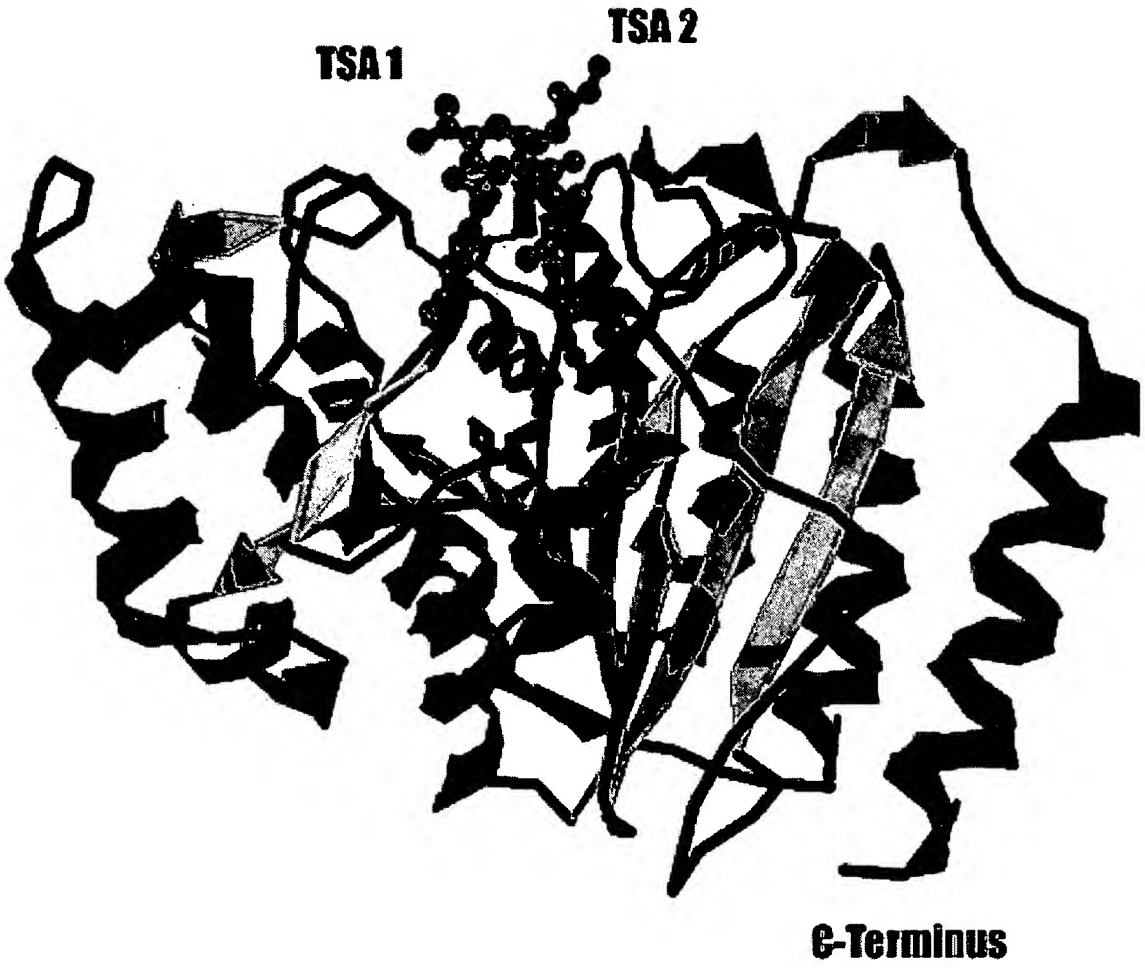
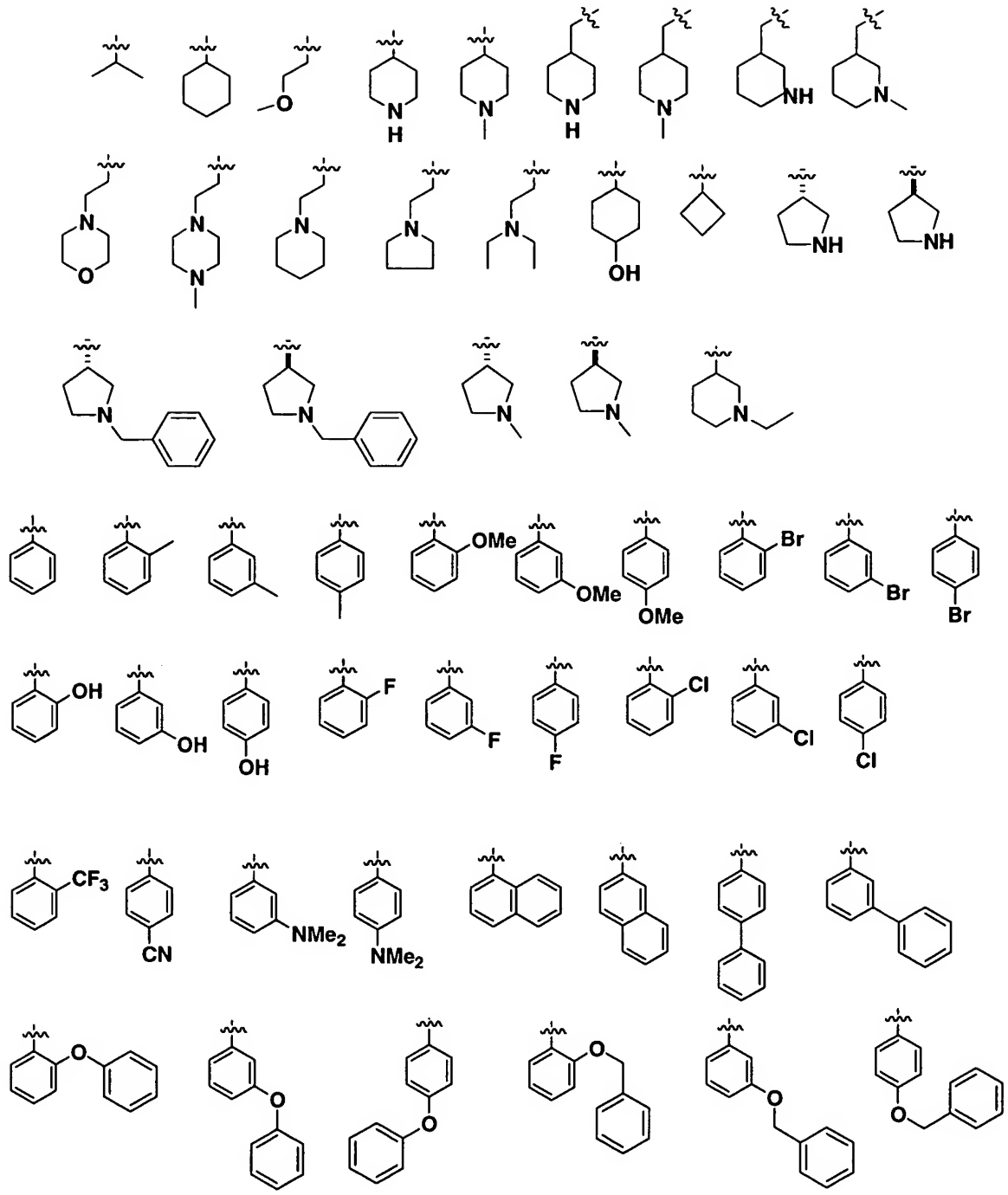


FIGURE 2A


O
N
H
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H
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NH
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O
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N
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OH
NH
NH
N
N
N
N
N
OMe
OMe
OMe
Br
Br
Br
OH
OH
OH
F
F
F
Cl
Cl
Cl
CF3
CN
NMe2
NMe2
O
O
O
O
O

FIGURE 2A (cont.)

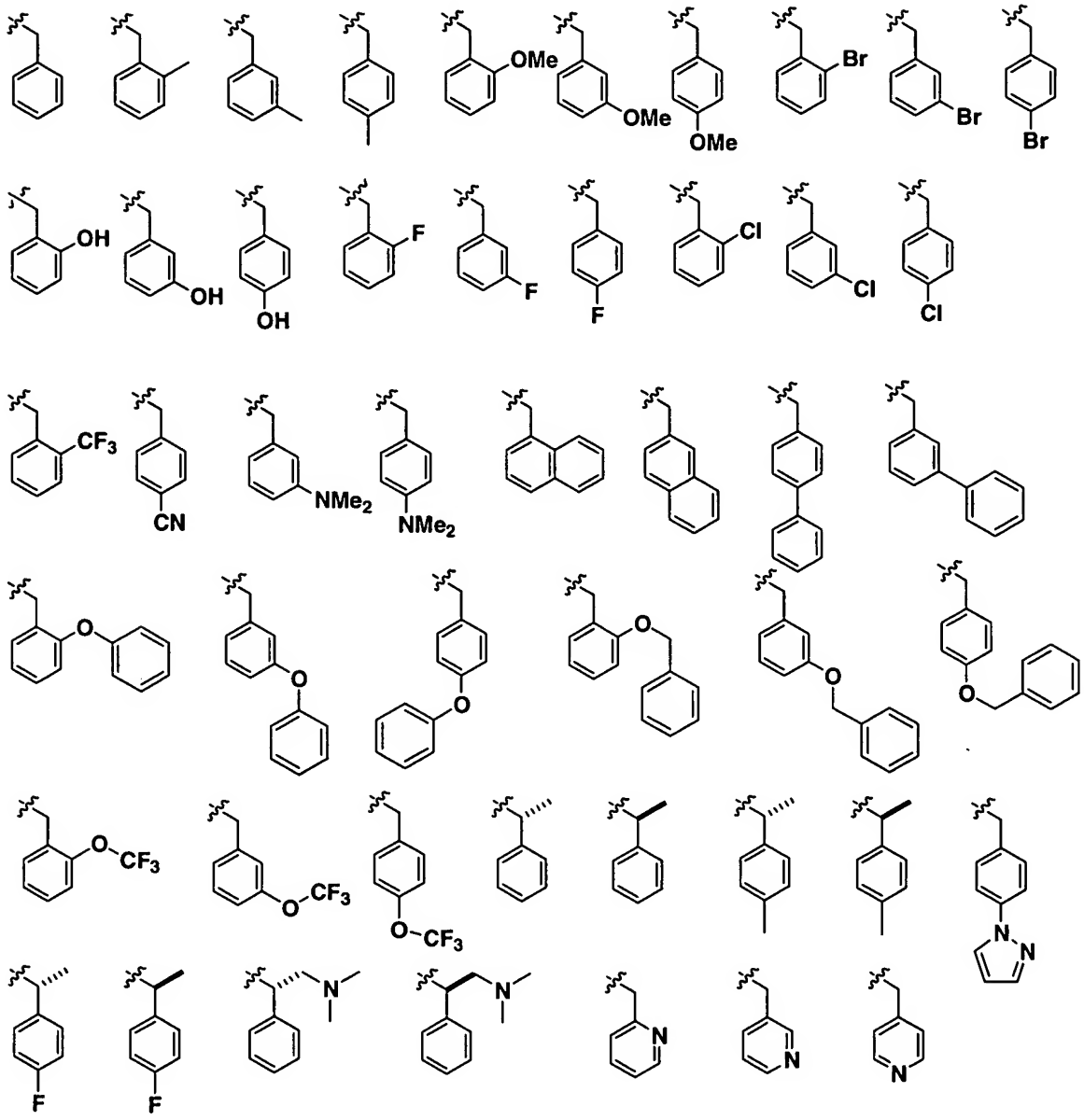

FIGURE 2A (cont.)

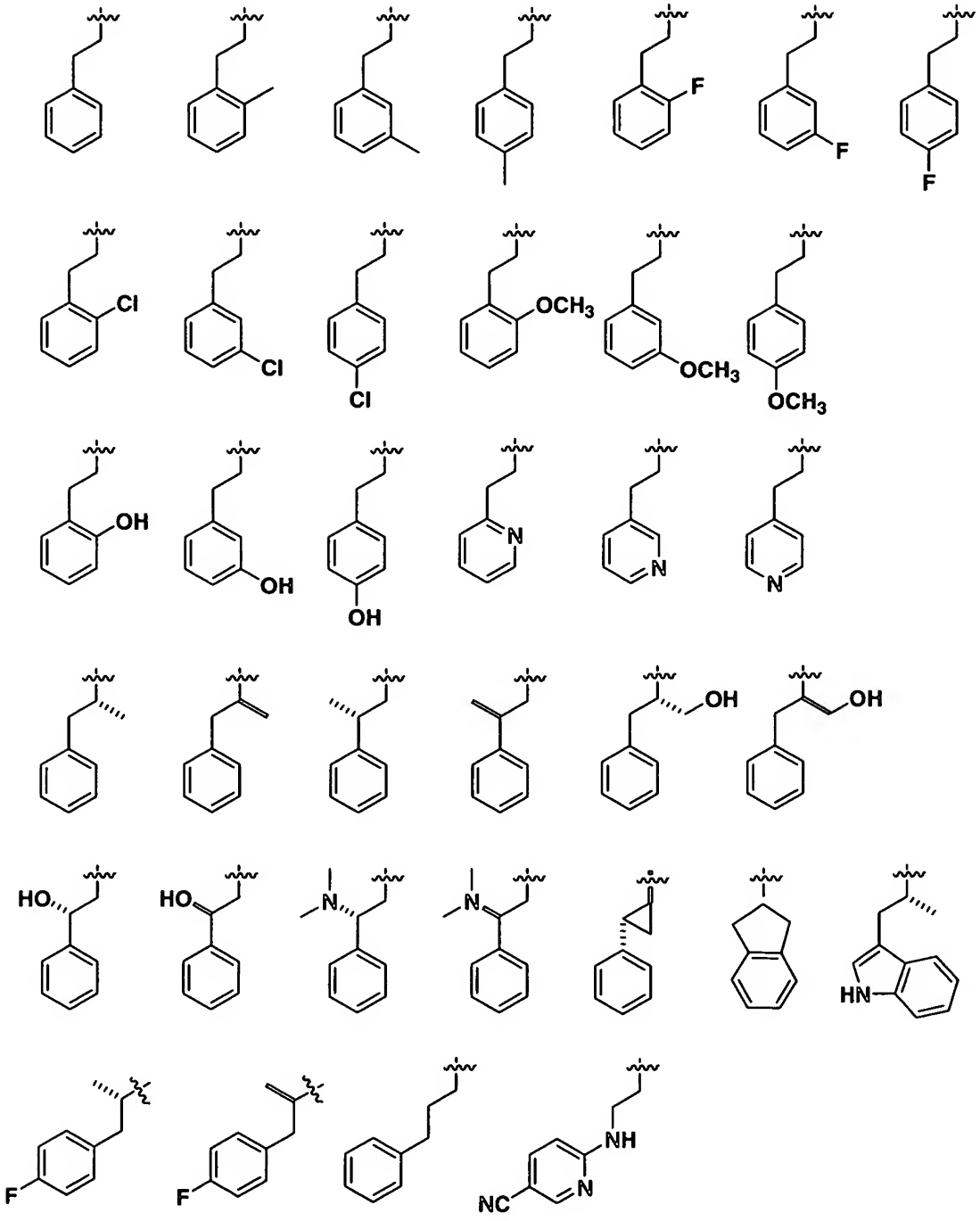

FIGURE 2A (cont.)

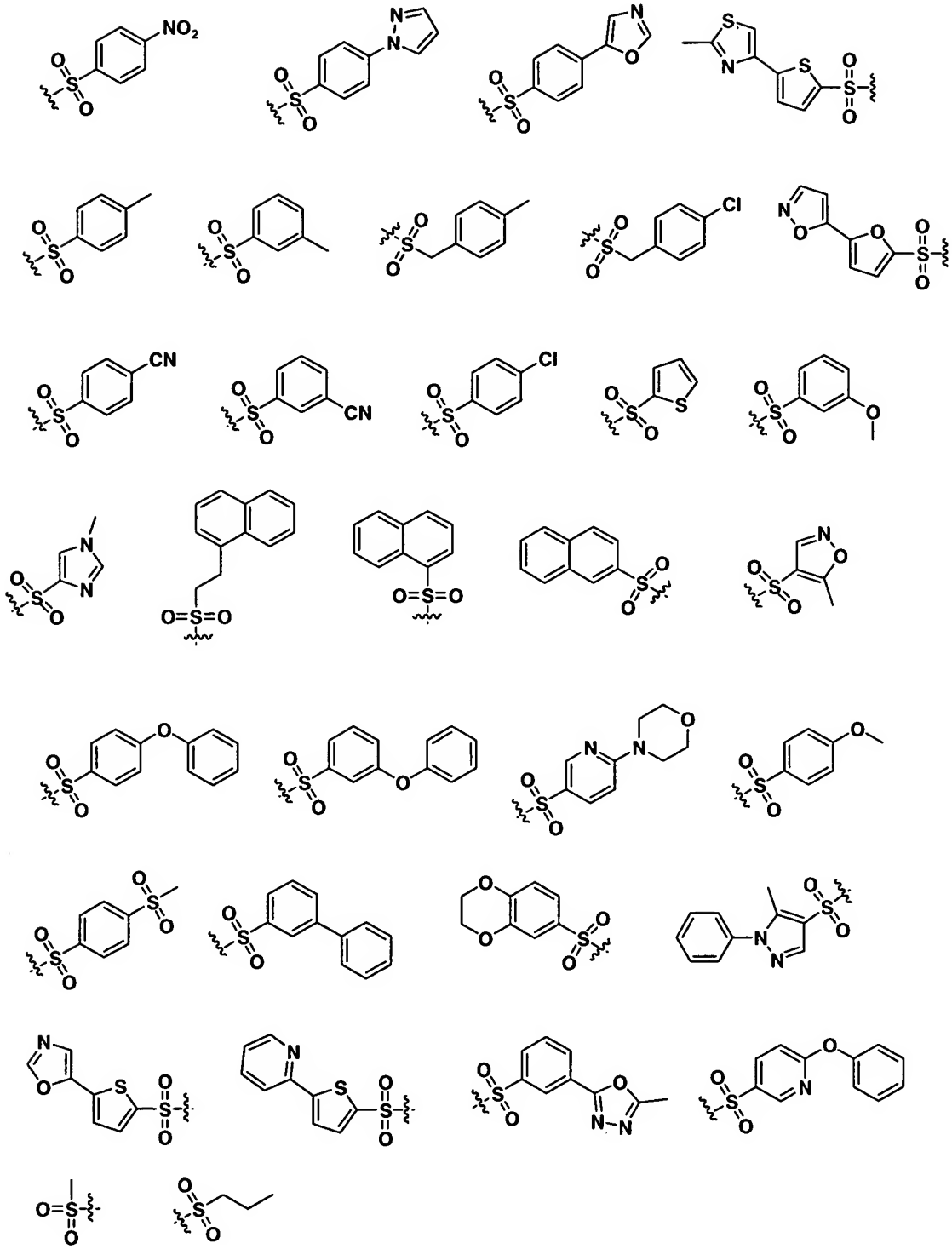

FIGURE 2A (cont.)

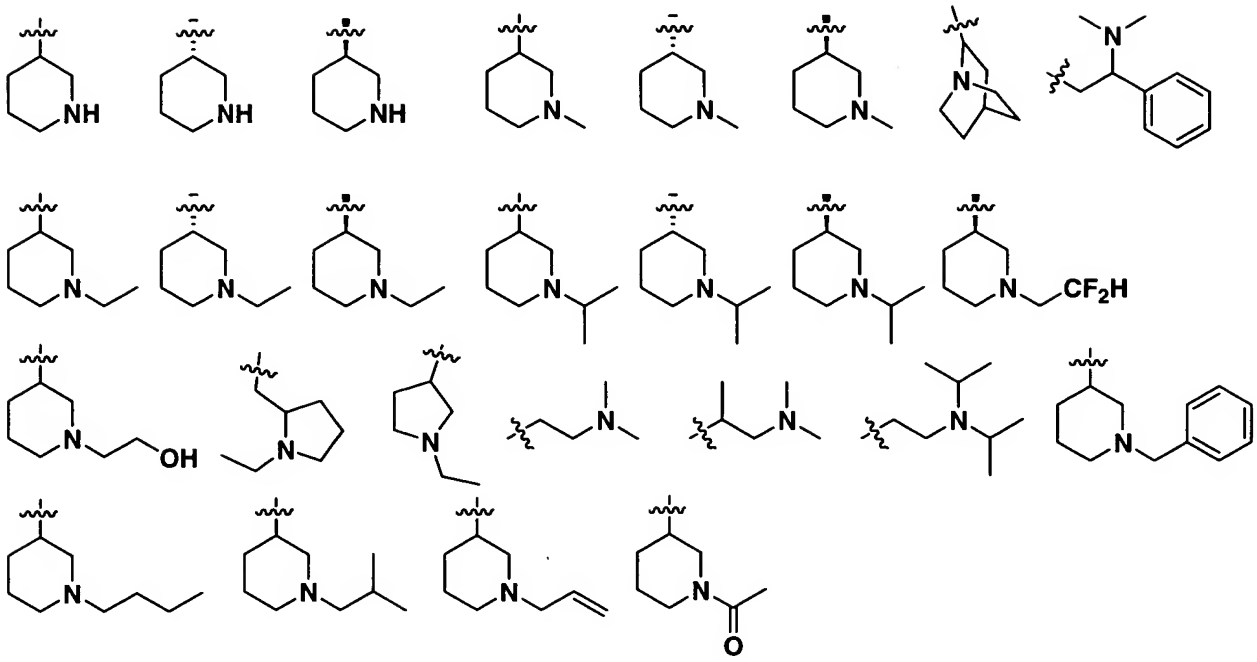
NH
NH
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FIGURE 2B

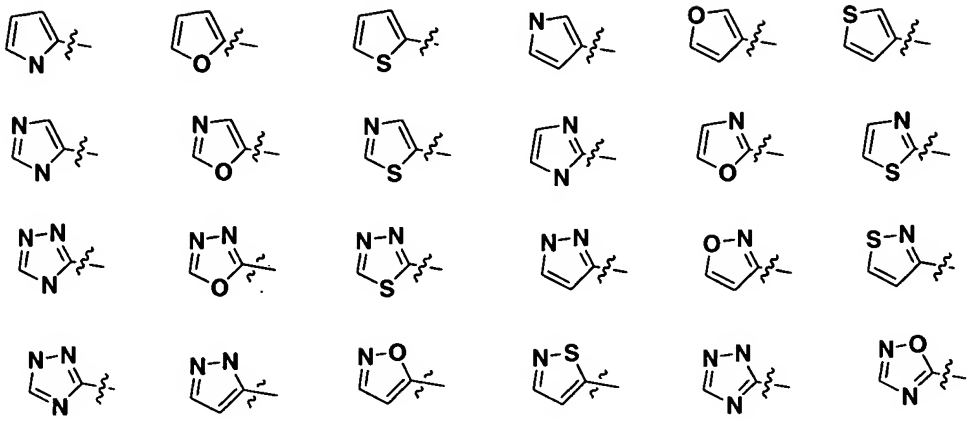

FIGURE 2C

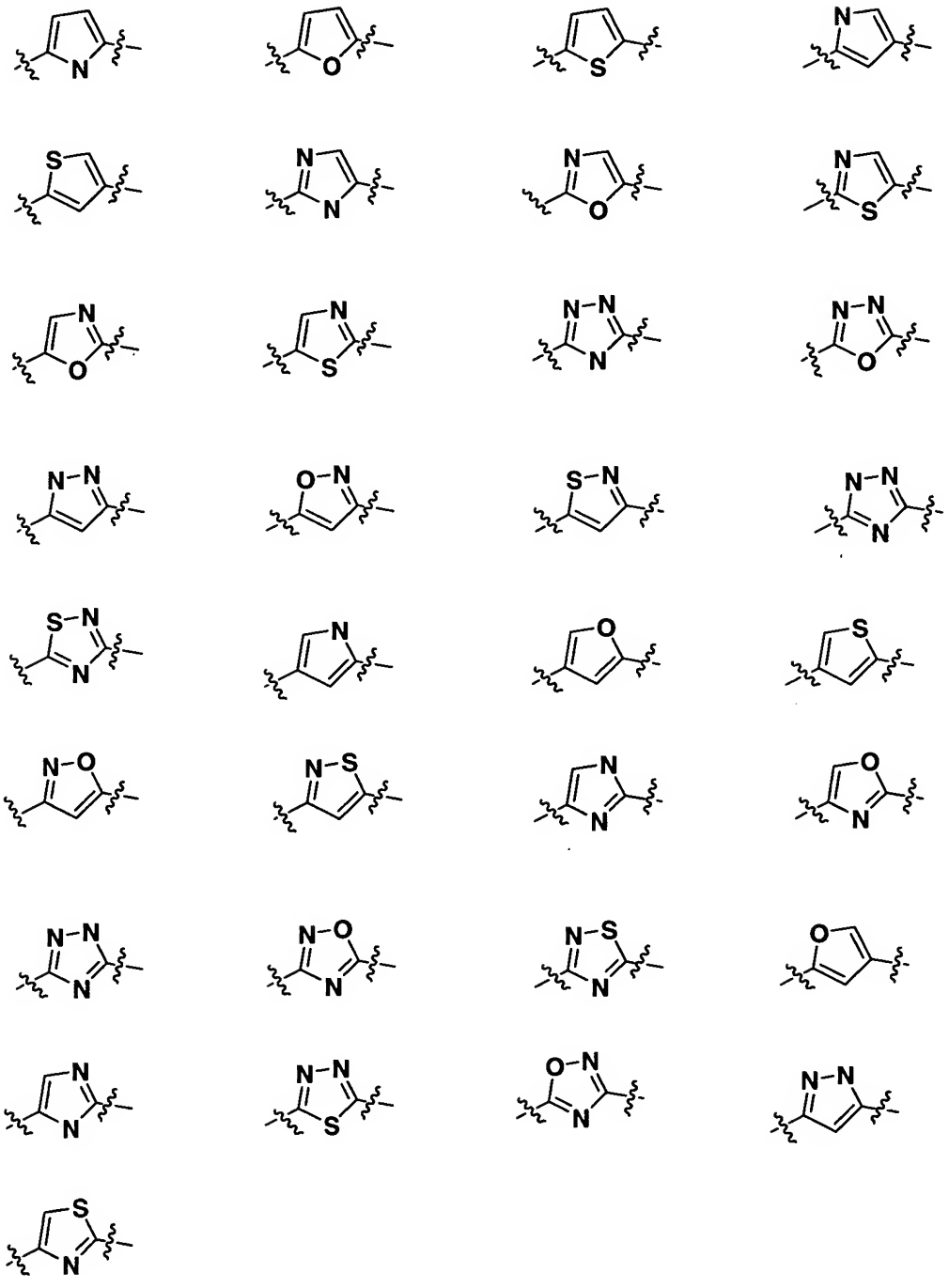

FIGURE 2C (cont.)

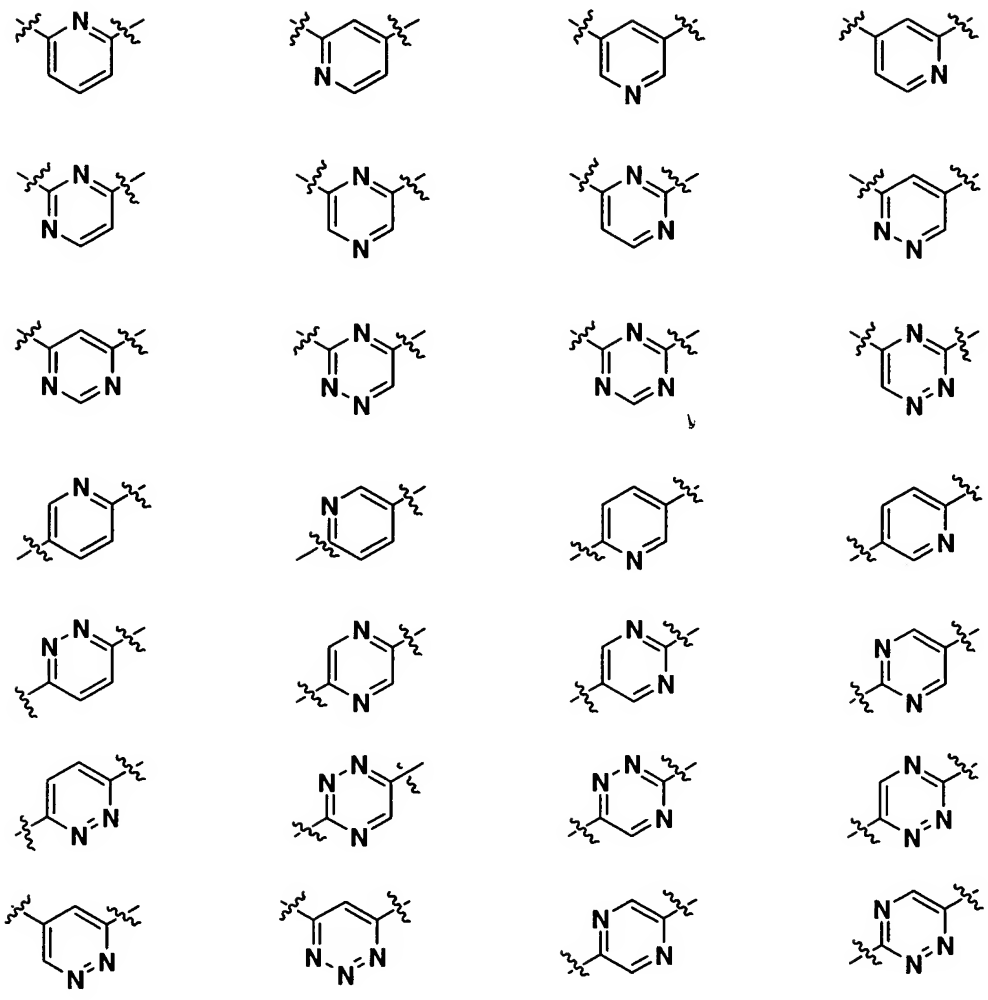

FIGURE 2D

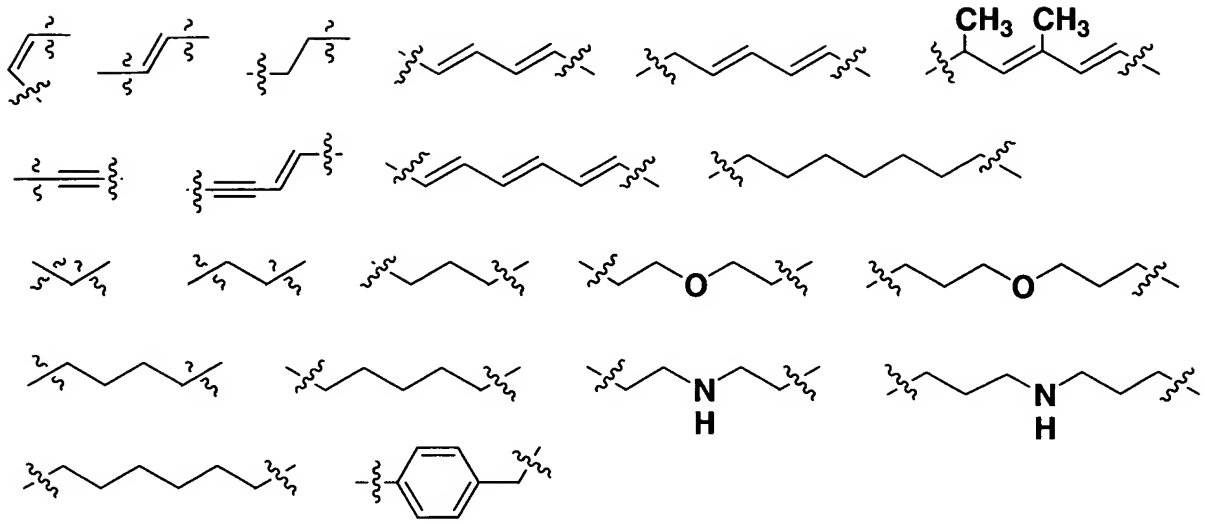

FIGURE 3

SEQ. ID No. 1

MSYYHHHHHHDYDIPTTENLYFQGAMEPGGSMAQTQGTRRKVCYYYDGDVGNYYYGQGHP
MKPHRIRMTHNLLLNYGLYRKMEIYRPHKANAEEMTKYHSDDYIKFLRSIRPDNMSEYSK
QMQRFNVGEDCPVFDGLFEFCQLSTGGSVASAVKLNKQQTDIAVNWAGGLHHAKKSEASG
FCYVNDIVLAILELLKYHQRVLYIDIDIHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTG
DLRDIGAGKGKYYAVNYPLRDGIDDESYEAIFKPVMSKVMEMFQPSAVVLQCGSDSLSGD
RLGCFNLTIKGHAKCVEFVKSFNLPMLMLGGGGYTIRNVARCWTYETAVALDTEIPNELP
YNDYFEYFGPDFKLHISPSNMTNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAI
PEESGDEDEDDPDKRISICSSDKRIACEEEFSDSEEEGEGGRKNSSNFKKAKRVKTEDEK
EKDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA

FIGURE 4

SEQ. ID No. 2

ATGTCGTACTACCATCACCATCACCATCACGATTACGATATCCCAACGACCGAAAACCTG
TATTTTCAGGGCGCCATGGAACCCGGGGGATCCATGGCGCAGACGCAGGGCACCCGGAGG
AAAGTCTGTTACTACTACGACGGGGATGTTGGAAATTACTATTATGGACAAGGCCACCCA
ATGAAGCCTCACCGAATCCGCATGACTCATAATTTGCTGCTCAACTATGGTCTCTACCGA
AAAATGGAAATCTATCGCCCTCACAAAGCCAATGCTGAGGAGATGACCAAGTACCACAGC
GATGACTACATTAAATTCTTGCGCTCCATCCGTCCAGATAACATGTCGGAGTACAGCAAG
CAGATGCAGAGATTCAACGTTGGTGAGGACTGTCCAGTATTCGATGGCCTGTTTGAGTTC
TGTCAGTTGTCTACTGGTGGTTCTGTGGCAAGTGCTGTGAAACTTAATAAGCAGCAGACG
GACATCGCTGTGAATTGGGCTGGGGGCCTGCACCATGCAAAGAAGTCCGAGGCATCTGGC
TTCTGTTACGTCAATGATATCGTCTTGGCCATCCTGGAACTGCTAAAGTATCACCAGAGG
GTGCTGTACATTGACATTGATATTCACCATGGTGACGGCGTGGAAGAGGCCTTCTACACC
ACGGACCGGGTCATGACTGTGTCCTTTCATAAGTATGGAGAGTACTTCCCAGGAACTGGG
GACCTACGGGATATCGGGGCTGGCAAAGGCAAGTATTATGCTGTTAACTACCCGCTCCGA
GACGGGATTGATGACGAGTCCTATGAGGCCATTTTCAAGCCGGTCATGTCCAAAGTAATG
GAGATGTTCCAGCCTAGTGCGGTGGTCTTACAGTGTGGCTCAGACTCCCTATCTGGGGAT
CGGTTAGGTTGCTTCAATCTAACTATCAAAGGACACGCCAAGTGTGTGGAATTTGTCAAG
AGCTTTAACCTGCCTATGCTGATGCTGGGAGGCGGTGGTTACACCATTCGTAACGTTGCC
CGGTGCTGGACATATGAGACAGCTGTGGCCCTGGATACGGAGATCCCTAATGAGCTTCCA
TACAATGACTACTTTGAATACTTTGGACCAGATTTCAAGCTCCACATCAGTCCTTCCAAT
ATGACTAACCAGAACACGAATGAGTACCTGGAGAAGATCAAACAGCGACTGTTTGAGAAC
CTTAGAATGCTGCCGCACGCACCTGGGGTCCAAATGCAGGCGATTCCTGAGGACGCCATC
CCTGAGGAGAGTGGCGATGAGGACGAAGACGACCCTGACAAGCGCATCTCGATCTGCTCC
TCTGACAAACGAATTGCCTGTGAGGAAGAGTTCTCCGATTCTGAAGAGGAGGGAGAGGGG
GGCCGCAAGAACTCTTCCAACTTCAAAAAAGCCAAGAGAGTCAAAACAGAGGATGAAAAA
GAGAAAGACCCAGAGGAGAAGAAAGAAGTCACCGAAGAGGAGAAAACCAAGGAGGAGAAG
CCAGAAGCCAAAGGGGTCAAGGAGGAGGTCAAGTTGGCCTGA

FIGURE 5

SEQ. ID No. 3

MGSMAYSQGGGKKKVCYYYDGDIGNYYYGQGHPMKPHRIRMTHNLLLNYGLYRKMEIYRP
HKATAEEMTKYHSDEYIKFLRSIRPDNMSEYSKQMQRFNVGEDCPVFDGLFEFCQLSTGG
SVAGAVKLNRQQTDMAVNWAGGLHHAKKSEASGFCYVNDIVLAILELLKYHQRVLYIDID
IHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGAGKGKYYAVNFPMRDGIDDES
YGQIFKPIISKVMEMYQPSAVVLQCGADSLSGDRLGCFNLTVKGHAKCVEVVKTFNLPLL
MLGGGGYTIRNVARCWTYETAVALDCEIPNELPYNDYFEYFGPDFKLHISPSNMTNQNTP
EYMEKIKQRLFENLRMLPHAPGVQMQAIPEDAVHEDSGDEDGEDPDKRISIRASDKRIAC
DEEFSDSEDEGEGGRRNVADHKKGAKKARIEEDKKETEDKKTDVKEEDKSKDNSGEKTDT
KGTKSEQLSNPGHHHHHH

FIGURE 6

SEQ. ID No. 4

ATGGGATCCATGGCGTACAGTCAAGGAGGCGGCAAAAAAAAAGTCTGCTACTACTACGAC
GGTGATATTGGAAATTATTATTATGGACAGGGTCATCCCATGAAGCCTCATAGAATCCGC
ATGACCCATAACTTGCTGTTAAATTATGGCTTATACAGAAAAATGGAAATATATAGGCCC
CATAAAGCCACTGCCGAAGAAATGACAAAATATCACAGTGATGAGTATATCAAATTTCTA
CGGTCAATAAGACCAGATAACATGTCTGAGTATAGTAAGCAGATGCAGAGATTTAATGTT
GGAGAAGATTGTCCAGTGTTTGATGGACTCTTTGAGTTTTGTCAGCTCTCAACTGGCGGT
TCAGTTGCTGGAGCTGTGAAGTTAAACCGACAACAGACTGATATGGCTGTTAATTGGGCT
GGAGGATTACATCATGCTAAGAAATCAGAAGCATCAGGATTCTGTTACGTTAATGATATT
GTGCTTGCCATCCTTGAATTACTAAAGTATCATCAGAGAGTCTTATATATTGATATAGAT
ATTCATCATGGTGATGGTGTTGAAGAAGCTTTTTATACAACAGATCGTGTAATGACGGTA
TCATTCCATAAATATGGGGAATACTTTCCTGGCACAGGAGACTTGAGGGATATTGGTGCT
GGAAAAGGCAAATACTATGCTGTCAATTTTCCAATGAGAGATGGTATAGATGATGAGTCA
TATGGGCAGATATTTAAGCCTATTATCTCAAAGGTGATGGAGATGTATCAACCTAGTGCT
GTGGTATTACAGTGTGGTGCAGACTCATTATCTGGTGATAGACTGGGTTGTTTCAATCTA
ACAGTCAAAGGTCATGCTAAATGTGTAGAAGTTGTAAAAACTTTTAACTTACCATTACTG
ATGCTTGGAGGAGGTGGCTACACAATCCGTAATGTTGCTCGATGTTGGACATATGAGACT
GCAGTTGCCCTTGATTGTGAGATTCCCAATGAGTTGCCATATAATGATTACTTTGAGTAT
TTTGGACCAGACTTCAAACTGCATATTAGTCCTTCAAACATGACAAACCAGAACACTCCA
GAATATATGGAAAAGATAAAACAGCGTTTGTTTGAAAATTTGCGCATGTTACCTCATGCA
CCTGGTGTCCAGATGCAAGCTATTCCAGAAGATGCTGTTCATGAAGACAGTGGAGATGAA
GATGGAGAAGATCCAGACAAGAGAATTTCTATTCGAGCATCAGACAAGCGGATAGCTTGT
GATGAAGAATTCTCAGATTCTGAGGATGAAGGAGAAGGAGGTCGAAGAAATGTGGCTGAT
CATAAGAAAGGAGCAAAGAAAGCTAGAATTGAAGAAGATAAGAAAGAAACAGAGGACAAA
AAAACAGACGTTAAGGAAGAAGATAAATCCAAGGACAACAGTGGTGAAAAAACAGATACC
AAAGGAACCAAATCAGAACAGCTCAGCAACCCCGGGCATCACCATCACCATCACTAA

FIGURE 7

SEQ. ID No. 5

MPGMDLNLEAEALAGTGLVLDEQLNEFHCLWDDSFPEGPERLHAIKEQLIQEGLLDRCVS
FQARFAEKEELMLVHSLEYIDLMETTQYMNEGELRVLADTYDSVYLHPNSYSCACLASGS
VLRLVDAVLGAEIRNGMAIIRPPGHHAQHSLMDGYCMFNHVAVAARYAQQKHRIRRVLIV
DWDVHHGQGTQFTFDQDPSVLYFSIHRYEQGRFWPHLKASNWSTTGFGQGQGYTINVPWN
QVGMRDADYIAAFLHVLLPVALEFQPQLVLVAAGFDALQGDPKGEMAATPAGFAQLTHLL
MGLAGGKLILSLEGGYNLRALAEGVSASLHTLLGDPCPMLESPGAPCRSAQASVSCALEA
LEPFWEVLVRSTETVERDNMEEDNVEESEEEGPWEPPVLPILTWPVLQSRTGLVYDQNMM
NHCNLWDSHHPEVPQRILRIMCRLEELGLAGRCLTLTPRPATEAELLTCHSAEYVGHLRA
TEKMKTRELHRESSNFDSIYICPSTFACAQLATGAACRLVEAVLSGEVLNGAAVVRPPGH
HAEQDAACGFCFFNSVAVAARHAQTISGHALRILIVDWDVHHGNGTQHMFEDDPSVLYVS
LHRYDHGTFFPMGDEGASSQIGRAAGTGFTVNVAWNGPRMGDADYLAAWHRLVLPIAYEF
NPELVLVSAGFDAARGDPLGGCQVSPEGYAHLTHLLMGLASGRIILILEGGYNLTSISES
MAACTRSLLGDPPPLLTLPRPPLSGALASITETIQVHRRYWRSLRVMKVEDREGPGHHHH
HH

FIGURE 9

SEQ. ID No. 7

MHHHHHHPMEEPEEPADSGQSLVPVYIYSPEYVSMCDSLAKIPKRASMVHSLIEAYALHK
QMRIVKPKVASMEEMAAFHTDAYLQHLQKVSQEGDDDHPDSIEYGLGYDCPATEGIFDYA
AAIGGATITAAQCLIDGMCKVAINWSGGWHHAKKDEASGFCYLNDAVLGILRLRRKFERI
LYVDLDLHHGDGVEDAFSFTSKVMTVSLHKFSPGFFPGTGDVSDVGLGKGRYYSVNVPIQ
DGIQDEKYYQICESVLKEVYQAFNPKAVVLQLGADTIAGDPMCSFNMTPVGIGKCLKYIL
QWQLATLILGGGGYNLANTARCWTYLTGVILGKTLSSEIPDHEFFTAYGPDYVLEITPSC
RPDRNEPHRIQQILNYIKGNLKHVV

FIGURE 8

SEQ. ID No. 6

ATGCCCGGGATGGATCTGAACCTTGAGGCTGAAGCACTGGCTGGCACTGGCTTGGTGTTG
GATGAGCAGTTAAATGAATTCCATTGCCTCTGGGATGACAGCTTCCCGGAAGGCCCTGAG
CGGCTCCATGCCATCAAGGAGCAACTGATCCAGGAGGGCCTCCTAGATCGCTGCGTGTCC
TTTCAGGCCCGGTTTGCTGAAAAGGAAGAGCTGATGTTGGTTCACAGCCTAGAATATATT
GATCTGATGGAAACAACCCAGTACATGAATGAGGGAGAACTCCGTGTCCTAGCAGACACC
TACGACTCAGTTTATCTGCATCCGAACTCATACTCCTGTGCCTGCCTGGCCTCAGGCTCT
GTCCTCAGGCTGGTGGATGCGGTCCTGGGGGCTGAGATCCGGAATGGCATGGCCATCATT
AGGCCTCCTGGACATCACGCCCAGCACAGTCTTATGGATGGCTATTGCATGTTCAACCAC
GTGGCTGTGGCAGCCCGCTATGCTCAACAGAAACACCGCATCCGGAGGGTCCTTATCGTA
GATTGGGATGTGCACCACGGTCAAGGAACACAGTTCACCTTCGACCAGGACCCCAGTGTC
CTCTATTTCTCCATCCACCGCTACGAGCAGGGTAGGTTCTGGCCCCACCTGAAGGCCTCT
AACTGGTCCACCACAGGTTTCGGCCAAGGCCAAGGATATACCATCAATGTGCCTTGGAAC
CAGGTGGGGATGCGGGATGCTGACTACATTGCTGCTTTCCTGCACGTCCTGCTGCCAGTC
GCCCTCGAGTTCCAGCCTCAGCTGGTCCTGGTGGCTGCTGGATTTGATGCCCTGCAAGGG
GACCCCAAGGGTGAGATGGCCGCCACTCCGGCAGGGTTCGCCCAGCTAACCCACCTGCTC
ATGGGTCTGGCAGGAGGCAAGCTGATCCTGTCTCTGGAGGGTGGCTACAACCTCCGCGCC
CTGGCTGAAGGCGTCAGTGCTTCGCTCCACACCCTTCTGGGAGACCCTTGCCCCATGCTG
GAGTCACCTGGTGCCCCCTGCCGGAGTGCCCAGGCTTCAGTTTCCTGTGCTCTGGAAGCC
CTTGAGCCCTTCTGGGAGGTTCTTGTGAGATCAACTGAGACCGTGGAGAGGGACAACATG
GAGGAGGACAATGTAGAGGAGAGCGAGGAGGAAGGACCCTGGGAGCCCCCTGTGCTCCCA
ATCCTGACATGGCCAGTGCTACAGTCTCGCACAGGGCTGGTCTATGACCAAAATATGATG
AATCACTGCAACTTGTGGGACAGCCACCACCCTGAGGTACCCCAGCGCATCTTGCGGATC
ATGTGCCGTCTGGAGGAGCTGGGCCTTGCCGGGCGCTGCCTCACCCTGACACCGCGCCCT
GCCACAGAGGCTGAGCTGCTCACCTGTCACAGTGCTGAGTACGTGGGTCATCTCCGGGCC
ACAGAGAAAATGAAAACCCGGGAGCTGCACCGTGAGAGTTCCAACTTTGACTCCATCTAT
ATCTGCCCCAGTACCTTCGCCTGTGCACAGCTTGCCACTGGCGCTGCCTGCCGCCTGGTG
GAGGCTGTGCTCTCAGGAGAGGTTCTGAATGGTGCTGCTGTGGTGCGTCCCCCAGGACAC
CACGCAGAGCAGGATGCAGCTTGCGGTTTTTGCTTTTTCAACTCTGTGGCTGTGGCTGCT
CGCCATGCCCAGACTATCAGTGGGCATGCCCTACGGATCCTGATTGTGGATTGGGATGTC
CACCACGGTAATGGAACTCAGCACATGTTTGAGGATGACCCCAGTGTGCTATATGTGTCC
CTGCACCGCTATGATCATGGCACCTTCTTCCCCATGGGGGATGAGGGTGCCAGCAGCCAG
ATCGGCCGGGCTGCGGGCACAGGCTTCACCGTCAACGTGGCATGGAACGGGCCCCGCATG
GGTGATGCTGACTACCTAGCTGCCTGGCATCGCCTGGTGCTTCCCATTGCCTACGAGTTT
AACCCAGAACTGGTGCTGGTCTCAGCTGGCTTTGATGCTGCACGGGGGGATCCGCTGGGG
GGCTGCCAGGTGTCACCTGAGGGTTATGCCCACCTCACCCACCTGCTGATGGGCCTTGCC
AGTGGCCGCATTATCCTTATCCTAGAGGGTGGCTATAACCTGACATCCATCTCAGAGTCC
ATGGCTGCCTGCACTCGCTCCCTCCTTGGAGACCCACCACCCCTGCTGACCCTGCCACGG
CCCCCACTATCAGGGGCCCTGGCCTCAATCACTGAGACCATCCAAGTCCATCGCAGATAC
TGGCGCAGCTTACGGGTCATGAAGGTAGAAGACAGAGAAGGACCCGGGCATCACCATCAC
CATCACTAA

FIGURE 10

SEQ. ID No. 8

ATGCACCATCACCATCACCATCCCATGGAGGAGCCGGAGGAACCGGCGGACAGTGGGCAG
TCGCTGGTCCCGGTTTATATCTATAGTCCCGAGTATGTCAGTATGTGTGACTCCCTGGCC
AAGATCCCCAAACGGGCCAGTATGGTGCATTCTTTGATTGAAGCATATGCACTGCATAAG
CAGATGAGGATAGTTAAGCCTAAAGTGGCCTCCATGGAGGAGATGGCCGCCTTCCACACT
GATGCTTATCTGCAGCATCTCCAGAAGGTCAGCCAAGAGGGCGATGATGATCATCCGGAC
TCCATAGAATATGGGCTAGGTTATGACTGCCCAGCCACTGAAGGGATATTTGACTATGCA
GCAGCTATAGGAGGGGCTACGATCACAGCTGCCCAATGCCTGATTGACGGAATGTGCAAA
GTAGCAATTAACTGGTCTGGAGGGTGGCATCATGCAAAGAAAGATGAAGCATCTGGTTTT
TGTTATCTCAATGATGCTGTCCTGGGAATATTACGATTGCGACGGAAATTTGAGCGTATT
CTCTACGTGGATTTGGATCTGCACCATGGAGATGGTGTAGAAGACGCATTCAGTTTCACC
TCCAAAGTCATGACCGTGTCCCTGCACAAATTCTCCCCAGGATTTTTCCCAGGAACAGGT
GACGTGTCTGATGTTGGCCTAGGGAAGGGACGGTACTACAGTGTAAATGTGCCCATTCAG
GATGGCATACAAGATGAAAAATATTACCAGATCTGTGAAAGTGTACTAAAGGAAGTATAC
CAAGCCTTTAATCCCAAAGCAGTGGTCTTACAGCTGGGAGCTGACACAATAGCTGGGGAT
CCCATGTGCTCCTTTAACATGACTCCAGTGGGAATTGGCAAGTGTCTTAAGTACATCCTT
CAATGGCAGTTGGCAACACTCATTTTGGGAGGAGGAGGCTATAACCTTGCCAACACGGCT
CGATGCTGGACATACTTGACCGGGGTCATCCTAGGGAAAACACTATCCTCTGAGATCCCA
GATCATGAGTTTTTCACAGCATATGGTCCTGATTATGTGCTGGAAATCACGCCAAGCTGC
CGGCCAGACCGCAATGAGCCCCACCGAATCCAACAAATCCTCAACTACATCAAAGGGAAT
CTGAAGCATGTGGTCTAG